IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method for the endothelium-preserving treatment of hollow organs, comprising contacting an isolated hollow organ with an endothelium-protective perfusion solution, wherein the endothelium-protective perfusion solution comprises at least the following components:

   (a) physiological electrolyte solution

   (b) at least about 0.1% per weight of native albumin

   (c) nutrient substrate;

   wherein the treatment results in a preservation ~~and/or~~ or repair of the endothelial tissue in the lumen of said hollow organ.

2. (Currently amended) The method of claim 1, wherein said native albumin in said endothelium-protective perfusion solution is replaced by about 1-10 vol-% homologous hemolysin-free serum or autologous serum.

3. (Currently amended) The method of claim 1, wherein said native albumin in said endothelium-protective perfusion solution is replaced by a homologous anti-coagulatory blood plasma preparation, which comprises human plasma proteins, anti-coagulatory-acting factors and immunoglobulins, and in which the pro-coagulatory-acting factors, isoagglutinins and ~~instable~~ unstable components of the blood plasma have been removed.

4. (Original) The method of claim 3, wherein the anti-coagulatory blood plasma preparation contains sodium ions, potassium ions, calcium ions, magnesium ions, chloride ions, human serum proteins, albumin and immunoglobulins.

5. (Currently amended) The method of claim 4, wherein the anti-coagulatory blood plasma preparation comprises the following composition: about 100-170 mM sodium ions, about 1-15 mM potassium ions, about 1-6 mM calcium ions, about 0.1-4 mM magnesium ions,

about 50-200 mM chloride ions, human serum proteins with about 25-45 g/l albumin, about 3-15 g/l IgG, about 1-10 g/l IgA and about 0.2-3 g/l IgM immunoglobulins at a pH value of about 7.3 to about 7.8 and an osmolarity of about 200-350 mosmol/kg.

6. (Currently amended) The method of ~~any one of claims 1-5~~ claim 1, wherein said nutrient substrate in said endothelium-protective perfusion solution is L-glutamine.

7. (Currently amended) The method of claim 6, wherein the concentration of L-glutamine in said endothelium-protective perfusion solution is about 0.5-10 mM.

8. (Currently amended) The method of claim 6, wherein said physiological electrolyte solution ~~contains~~ is selected from the group consisting of about 2-10 mM glucose ~~and/or~~ and about 1-10 mM pyruvate.

9. (Currently amended) The method of claim 6, wherein said physiological electrolyte solution ~~contains~~ is selected from the group consisting of about 0.1-0.6 U/ml heparin, ~~and/or~~ about 50-100 µM of ~~each of~~ uric acid ~~and/or~~ and about 50-100 µM of ascorbate.

10. (Currently amended) The method of claim 6 ~~any one of claims 1-9~~, wherein said physiological electrolyte solution comprises the following components: about 100-150 mM NaCl; about 1-15 mM KCl; about 0.1-4 mM $MgSO_4$; about 0.5-2 mM KH_2PO_4; about 24-48 mM histidin-Cl and about 1-3 mM $CaCl_2$.

11. (Currently amended) The method of claim 1, wherein the endothelium-protective perfusion solution is an anti-coagulatory and non-agglutinating blood plasma preparation, comprising human plasma proteins, anti-coagulatory-acting factors and immunoglobulins, and in which the pro-coagulatory-acting factors, isoagglutinins and ~~instable~~ unstable components of the blood plasma have been removed.

12. (Currently amended) The method of claim 11, wherein the blood plasma preparation comprises the following components: about 100-170 sodium ions, about 1-15 mM

potassium ions, about 1-6 mM calcium ions, about 0.1-4 mM magnesium ions, about 50-200 mM chloride ions, about 25-45 g/l albumin, about 3-15 g/l IgG, about 1-10 g/l IgA and about 0.2-3 g/l IgM immunoglobulins.

13. (Original) The method of claim 12, wherein the blood plasma preparation was treated with β-propiolactone and UV-radiation for virus inactivation.

14. (Currently amended) The method of claim 1 ~~any one of claims 1-13~~, wherein said perfusion solution contains one or more endothelium-promoting growth factors.

15. (Original) The method of claim 14, wherein said growth factor is selected from the group consisting of epidermal growth factor (EGF), fibroblast growth factor (FGF), vascular endothelial growth factor (VEGF) and stem cell factor (SCF).

16. (Currently amended) The method of claim 1 ~~any one of claims 1-15~~, wherein said perfusion solution contains flavonoids.

17. (Currently amended) The method of claim 16, wherein the flavonoid is quercetin ~~and/or~~ or trihydroxyethyl rutoside.

18. (Currently amended) The method of claim 1 ~~any one of claims 1-17~~, wherein said perfusion solution contains papaverin ~~and/or~~ or adenosine.

19. (Currently amended) The method of claim 1 ~~any one of claims 1-18~~, wherein said perfusion solution contains cardioplegic concentrations of potassium of more than about 6 mM.

20. (Currently amended) The method of claim 1 ~~any one of claims 1-19~~, wherein said hollow organ is selected from the group consisting of a heart, intestine, uterus, kidney, bladder, lung, liver[[,]] and spleen.

21. (Currently amended) The method of claim 1 ~~any one of claims 1-19~~, wherein said hollow organs are biological vessels.

22. (Original) The method of claim 21, wherein said biological vessels are blood vessels or lymphatic vessels.

23. (Cancelled)

24. (Currently amended) An endothelium-protective perfusion solution comprising:

(a) physiological electrolyte solution
(b) at least about 0.1% per weight of native albumin
(c) about 0.5 to 10 mM L-glutamine.

25. (Currently amended) The perfusion solution of claim 24, wherein said native albumin is replaced by about 1-10 vol-% homologous hemolysin-free serum or autologous serum.

26. (Currently amended) The perfusion solution of claim 24, wherein said native albumin in the endothelium-protective perfusion solution is replaced by a homologous anti-coagulatory blood plasma preparation, comprising human plasma proteins, anti-coagulatory-acting factors and immunoglobulins, and in which the pro-coagulatory-acting factors, isoagglutinins and ~~instable~~ unstable components of the blood plasma ~~were~~ have been removed.

27. (Original) The perfusion solution of claim 26, wherein the anti-coagulatory blood plasma preparation contains sodium ions, potassium ions, calcium ions, magnesium ions, chloride ions, human serum proteins, albumin and immunoglobulins.

28. (Currently amended) The perfusion solution of claim 27, wherein the anti-coagulatory blood plasma preparation comprises the following composition: about 100-170 mM sodium ions, about 1-15 mM potassium ions, about 1-6 mM calcium ions, about 0.1-4

mM magnesium ions, about 50-200 mM chloride ions, human serum proteins with about 25-45 g/l albumin, about 3-15 g/l IgG, about 1-10 g/l IgA and about 0.2-3 g/l IgM immunoglobulins at a pH value of about 7.3 to about 7.8 and an osmolarity of about 200-350 mosmol/kg.

29. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 24-28~~, wherein the concentration of L-glutamine is about 2.5 mM.

30. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 24-28~~, wherein the concentration of L-glutamine is about 5 mM.

31. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 24-28~~, wherein the concentration of L-glutamine is about 7.5 mM.

32. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 24-31~~, wherein said physiological electrolyte solution comprises the following components: about 100-150 mM NaCl; about 1-15 mM KCl; about 0.1-4 mM $MgSO_4$; about 0.5-2 mM KH_2PO_4; about 24-48 mM histidin-Cl and about 1-3 mM $CaCl_2$.

33. (Currently amended) The perfusion solution of claim 32, wherein said physiological electrolyte solution contains about 2-10 mM glucose ~~and/or~~ or about 1-10 mM pyruvate.

34. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 23-33~~, wherein said physiological electrolyte solution ~~contains~~ is selected from the group consisting of about 0.1-0.6 U/ml heparin, ~~and/or~~ 50-100 µM of ~~each of~~ uric acid ~~and/or~~ and about 50-100 µM of ascorbate.

35. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 23-34~~, wherein the pH value in said physiological electrolyte solution is about 7.4 +/- about 0.04 under atmospheric condition.

36. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 24-35~~, wherein said endothelium-protective perfusion solution further contains antibiotics.

37. (Currently amended) The perfusion solution of claim 36, wherein said antibiotics are about 50-400 U/ml penicillin ~~and/or~~ or about 0.1-0.4 mg/ml streptomycin.

38. (Currently amended) The perfusion solution of claim 24, wherein said perfusion solution is an anti-coagulatory and non-agglutinating blood plasma preparation, comprising human plasma proteins, anti-coagulatory-acting factors and immunoglobulins, and in which the pro-coagulatory-acting factors, isoagglutinins and ~~instable~~ unstable components of the blood plasma have been removed.

39. (Currently amended) The method of claim 38, wherein the blood plasma preparation comprises the following components: about 100-170 sodium ions, about 1-15 mM potassium ions, about 1-6 mM calcium ions, about 0.1-4 mM magnesium ions, about 50-200 mM chloride ions, about 25-45 g/l albumin, about 3-15 g/l IgG, about 1-10 g/l IgA and about 0.2-3 g/l IgM immunoglobulins.

40. (Original) The perfusion solution of claim 39, wherein the blood plasma preparation was treated with β-propiolactone and UV-radiation for virus inactivation.

41. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 24-40~~, wherein said perfusion solution contains one or more endothelium-promoting growth factors.

42. (Original) The perfusion solution of claim 41, wherein said growth factor is selected from the group consisting of epidermal growth factor (EGF), fibroblast growth factor (FGF), vascular endothelial growth factor (VEGF) and stem cell factor (SCF).

43. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 25-42~~, wherein said perfusion solution contains flavonoids.

44. (Currently amended) The perfusion solution of claim 43, wherein the flavonoid is quercetin ~~and/or~~ or trihydroxyethyl rutoside.

45. (Currently amended) The perfusion solution of claim 24 any one of claims 25-44, wherein said perfusion solution contains papaverin ~~and/or~~ or adenosine.

46. (Currently amended) The perfusion solution of claim 24 ~~any one of claims 25-45~~, wherein said perfusion solution contains cardioplegic concentrations of potassium of more than about 6 mM.

47. (Currently amended) An apparatus for the endothelium-preserving treatment of isolated biological vessels comprising a chamber ~~(1)~~, an axially movable stamp ~~(6)~~, a cannula ~~(5)~~, a reservoir container ~~(7)~~, which contains ~~the~~ an endothelium-preserving perfusion liquid and a sealing device ~~(3)~~, wherein the cannula is connected with the axially moveable stamp ~~(6)~~ such that the cannula can be moved together with the stamp into the chamber, and wherein the sealing device ~~(3)~~ can clasp one end of the vessel and the cannula is connected with the other end of the vessel such that the endothelium-protective perfusion solution can be selectively directed into the biological vessel from the reservoir container ~~(7)~~, preferably under a pressure gradient.

48. (Original) The apparatus of claim 47, wherein said sealing device comprises sealing discs which are arranged in stacks in a knurled thumb screw.

49. (Currently amended) The apparatus of claim 48, wherein the sealing discs have a diameter of about 1-10 mm and/or a thickness of about 0.3-3 mm.

50. (Currently amended) The apparatus of claim 47 ~~any one of claims 47-49~~, wherein said apparatus further contains a thermostat device for heating the perfusion liquid.

51. (Currently amended) The apparatus of claim 47 ~~any one of claims 47-50~~, wherein said endothelium-protective perfusion solution is any one as defined in any one of claims 24-46.

52. (Currently amended) Use of an endothelium-protective perfusion solution defined in ~~according to~~ any one of claims 24-46 for the preservation of endothelium in isolated hollow organs or biological vessels.

53. (Currently amended) Use of an endothelium-protective perfusion solution defined in ~~according to~~ any one of claims 24-46 for maintenance ~~and/or~~ or repair of endothelial tissue in isolated hollow organs or biological vessels.

54. (Currently amended) Use of an endothelium-protective perfusion solution defined in ~~according to~~ any one of claims 24-46 for therapy ~~and/or~~ or prevention of vascular ~~obliterations~~ occlusions in isolated hollow organs or biological vessels.

55. (New) The apparatus of claim 47, wherein said endothelium-protective perfusion solution is any one as defined in any one of claims 1-23.

56. (New) Use of an endothelium-protective perfusion solution defined in any one of claims 1-23 for the preservation of endothelium in isolated hollow organs or biological vessels.

57. (New) Use of an endothelium-protective perfusion solution defined in any one of claims 1-23 for maintenance or repair of endothelial tissue in isolated hollow organs or biological vessels.

58. (New) Use of an endothelium-protective perfusion solution defined in any one of claims 1-23 for therapy or prevention of vascular occlusions in isolated hollow organs or biological vessels.